REMARKS

The claims have been amended to include the element of a dynamic capillary filter in which capillary channels transiently form in the presence of a fluid biologic sample. None of the references cited in the Written Opinion include this element.

Reference DI discloses devices for the analysis of cell motility that comprise a solid substrate that includes a receiving well and a mesoscale (i.e., between 0. 1 and 1,000 Vm) flow channel system extending from the receiving well to end in a target chamber (p. 17, lines 7-10). In practice, all the channels, including the target chamber, the receiving well and the flow channel system, are first filled with an appropriate biological medium before a sample of interest is applied at an inlet port. Thereafter, motile cells of interest arc allowed to migrate from the inlet port through the receiving well and the flow channel, eventually to end at the target chamber. Cellular motility is measured as the cells traverse the flow chamber (p. 23, lines 5-20).

The device in the D I reference differs from that of the present invention. While the device of reference DI may incorporate flow-regulating particles in the receiving well (p. 25, lines 5-32), these particles, because they are already wetted when the sample is applied, function in an entirely different manner than those of the present invention. For example, reference DI points out that it is desirable that fluid flow properties in the devices should neither impede nor enhance the movement of cells in the flow channel (p. 23, lines 22-28); thus, the flow-regulating particles function to reduce ingress of the bulk sample into the flow channel by fractionating the flow pattern of the sample (p. 25, lines 18-23). Thus, the flow-regulating particles act like particles in gel chromatography to separate solutes based on size.

The device of the present invention is not first filled with any fluid prior to sample application. Upon addition of a liquid sample containing a fluid component and a non-fluid component, the particles in the dynamic capillary filter form transient capillary channels that pull the fluid component of the liquid sample through capillary action. The device of

reference DI does not include a dynamic capillary filter that creates transiently forming capillary channels upon application of the sample.

The assay apparatus of reference D2 also does not include or comprise a dynamic capillary filter. The apparatus includes a solid support comprising a plurality of interconnected elements through which a liquid can flow (p. 1, lines 21-23). The support may either act to hold the applied liquid in place for subsequent analysis (p. 2, lines 28-3 1; p. 5, lines 4-11), as a support for a chemical reaction (p. 3, lines 6-7), or as a support for cell growth (p. 3, lines 9-19). However, regardless of the intended function, the support always comprises a rigid support having a porous face and an opposing impervious face (p. 4, lines 25-3 1; Fig. 1). The particles used in the assay apparatus are bound together in a rigid framework and thus cannot form a dynamic capillary filter with transiently forming capillary channels.

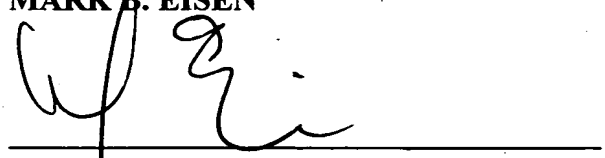
The apparatus of reference D3 is similar to that disclosed in reference D2, in that the apparatus comprises a structure containing particles and an adhesive that holds these particles together in a rigid framework (col. 4, lines 1-10). The apparatus comprises a "coherent, three-dimensional lattice" (col. 6, lines 50-53). The structure permits capillary transport of an applied liquid through the framework (col. 7, lines 38-43). However, the apparatus does not comprise a dynamic capillary filter that creates transiently forming capillary channels upon application of a liquid sample.

The device of reference D4 is a cuvette. Claims 14 and 41 (now claim 40), the independent claims against which reference D4 was asserted, are amended to incorporate the element of a dynamic capillary filter that is capable of separating a non-fluid component from a fluid component of a liquid sample. The apparatus of reference D4 does not include a dynamic capillary filter and is not capable of separating a fluid component from a non-fluid component.

Therefore, it is submitted that the claims, as amended, are distinguishable over the cited prior art. The claims, as amended, are novel and involve an inventive step.

No new subject matter has been added to the application by way of this amendment. Entry of this amendment is respectfully requested.

Yours very truly,
MARK B. EISEN



Agent on Behalf of Applicant

20 Queen St. W., Suite 3202, Box 102
Toronto, Ontario M5H 3R3
(416) 971-7202, Ext. 242
meisen@dimock.com

MBE/rt
Encls. - new pages 40 to 50 containing claims 1 to 78